

# Prevention of Sports Injuries

## Snow Skiing

Diana Settles, MAT, ATC  
Manager, Injury Prevention Physical Fitness Programs  
Navy Environmental Health Center, Portsmouth, VA

### **PERSONAL FITNESS:**

- Pace yourself; don't do too much too soon when conditioning for ski season.
- Be aware of your personal fatigue level. Skiing injury rates peak in mid-afternoon to late afternoon; fatigue is a significant risk factor in skiing injuries.
- When preparing for ski season, begin participating in activities specific to skiing, such as using the indoor ski machine and upper and lower body muscular fitness exercises. This will strengthen the connective tissue (muscle, bones, ligaments, and tendons) and will provide a good aerobic foundation = decreased chances of injury occurrence during snow ski season.
- Beginner skiers or low ability skiers may be more susceptible to injury.
- Remember to warm-up and stretch at least 5 – 10 minutes before skiing.

### **EQUIPMENT:**

- Use equipment advantageous to injury prevention. The design and function of equipment contribute a great deal to the safety of skiing (multimode release bindings and modern midcalf-height boots).
- Note that research is suggesting that new aggressive double-poling and V-skating methods are leading to an increase in soft tissue and bony stress fractures.
- In Alpine skiing injuries, the ski-pole grip may cause an injury to the thumb. Those using a grip with a broad superior plate are more likely to obtain gamekeepers thumb (hyperextension/abduction injury to the thumb).

### **TRAINING / TECHNIQUE:**

- Avoid participation in high risk behaviors, - i.e., showing off, hot-shotting, etc. Stick to skiing as the singular sport you are participating in.
- The ski racing technique, when the pressure to the ski edge is applied posteriorly on the ski, offers less control and places the racer at increased risk for ACL ligament sprains.
- Lunging across the finish line while "sitting back on the tails" places the skier at risk and should be discouraged.
- Contact a local MWR Trainer for additional information on skiing conditioning and safety guidelines.

### **ENVIRONMENT:**

- Be aware of the environment around you. Be cautious of the potential for avalanche. Be aware of potential environmental hazards such as trees, bushes, other skiers, etc.
- Dress for the sport to prevent cold injuries such as hypothermia and frostbite. Layered clothing is recommended. Accessories such as glove liners, masks, etc. are also recommended for skiers.
- Alcohol consumption should be discouraged as it promotes heat loss.
- Liquid and nutrition replenishment is recommended to decrease exposure-related illness.

### **NOTES:**

- Most injuries in skiing are the result of a fall.
- Skiing fatalities most commonly occur due to heart attack, trauma to the head and neck, and hypothermia.
- A history of prior injury to an extremity indicates an increased risk of re-injury.

REFERENCE: Caine, J., Caine, C., and Lindner, K. Epidemiology of Sports Injuries. Human Kinetics Publishers, Inc., 1996.